

bellum purple at tip, and on each side of a medium greenish-yellow stripe, edges greenish. Column purple at tip." (615.)

Stem 9 or 10 inches high, erect; leaves 2-3 inches long. The same plant occurs among Linden's collections, but no locality is attached to my specimen. This is the largest of the published species. There is one very like it in Schomburgk's Guiana collections, but my specimens of it are scarcely sufficient for publication.

N.B. *Pogonia Cubensis*, Rehb. f., found in Cuba by Pöppig, is not in Wright's Collection.

XXIX.—*Description of Camptonyx, a new Indian genus of Terrestrial Shells.* By W. H. BENSON, Esq.

[With a Plate.]

CAMPTONYX, nov. gen., nobis.

Testa pileiformis, oblique conica, apice libero subspirali, oblique incurvato, versus latus dextrum spectante; anfractibus $1\frac{1}{2}$, ultimo pæne totam testam efformante; costa dorsalis carinæformis subspiralis sulcum interiorem tegens, ab apice usque ad marginem dextrum descendens; apertura maxima, mediana, symmetrica, regulariter ovata, integra, omni latere expansa.

C. Theobaldi, nobis.

Testa (supina) cornucopiam simulante, tenui, concentrice rugosa, purpureo-fusca, dorso ad latus sinistrum compressiusculo, costa carinæformi subspirali, sulco postico adjecto, ab apice usque ad marginem dextrum aperturæ descendente; apice obtuso; apertura ovali, intus purpureo-lutescente, nitida, peristomate acuto.

Long. 10; diam. dorsali $4\frac{1}{2}$ mill.; apert. 8 mill. longa, 6 lata.

Ad latera jugi montis "Girnar" dictæ, Peninsulæ Guzeratensis, invenit W. Theobald junior.

This singular shell, sent to me by Mr. W. Theobald, jun., as a cap-shaped *Succinea*, was found by him in abundance on the central peak of Mount Girnar in Kattiwár, on the peninsula which separates the Gulfs of Cutch and Cambay. He states that these hills form an amphitheatre, with a central crateriform clump, the peak rising to an altitude of 2500 feet. A piece of the weathered rock forwarded by him contains, in a space of 2 inches square, twenty-six young individuals adhering most tenaciously to the surface, like Limpets or *Ancylus*, with indications of the adherence of several larger specimens. The rock sent is a small-grained syenite, with a few specks of mica. A gigantic *Succinea*, 24 millimetres in length, and 15 in breadth, and which occurred of a size larger by $\frac{1}{10}$ th of an inch, was found abundant by Mr. Theobald on the same peak.

Had *Camptonyx* been found in a marine locality, it would

have been perhaps regarded as a *Pileopsis*; in fresh water, it might have been taken for an aberrant form of *Ancylus*. The circumstance of the shell not being internal prevents its association with *Parmacella*; while the smallness of the testaceous part of *Testacella* and *Plectrophorus*, compared with their animals, forbids their union with a genus in which the animal is completely covered by the shell, and adheres thereby to flat surfaces. Nevertheless it is probable that *Camptonyx* holds an intermediate place between those genera and *Succinea*, and that it bears the same relation to the latter that *Ancylus* does (through the intermediate Indian genus *Camptoceras*) to *Lymnæa*.

The external rib and furrow on the shell have a corresponding depression and ridge internally, but they are less strongly marked. In the animal the sole is oblong, of a pale colour, transversely corrugated, and surrounded on all sides by a thick greyish hyaline mantle, which completely hides the sole during æstivation, exuding a gluten most tenacious when dried, and which even twenty-four hours' immersion in water, tepid when first applied, failed in some instances to dissolve. The animal cannot be induced to exhibit tentacula or ocular points either by steeping in water or by manipulation with a camel's-hair pencil. There is a slight appearance of two nipples, or a bilobed muzzle, above the narrow fore-end of the sole.

The colour of the cavity of the shell is a rich purplish ochre, and the general aspect betokens rather an inhabitant of the land than of fresh water. Some of the *Succineæ* found with it have precisely the same tinge within the aperture, and have been cemented to rocks by a very tenacious substance. Mr. Theobald was doubtless justified by the situations in which he found his specimens—on a high peak, where the drought, at the time of his visit, had driven the largest examples of the gigantic *Succinea* into inaccessible crevices in the rocks,—in attributing terrestrial habits to the animal. It appears probable that *Camptonyx* only moves in search of food during the height of the rainy season, when the air is saturated with warm moisture, and that its habits are very sluggish.

I have neither the instruments nor the practice necessary for an anatomical examination of specimens so small as those which have reached me with the included animal, and have therefore taken measures for putting them into expert hands. Whether the form may eventually be referred to the *Helicidæ* or to a station near *Ancylus*, or prove to be the type of a new family, I am of opinion that the characters of the testaceous covering will justify the formation of a separate genus for its reception, and on that account I have considered it advisable not to

delay publication until an investigation of the animal can take place.

Cheltenham, 10th April, 1858.

I have much pleasure in adding the following note embodying the results of an examination which Mr. S. P. Woodward has had the kindness to undertake.

Mr. Woodward writes—"The shell appears to be closely allied to *Ancylus*, but differs in being dextral (in which respect it agrees with the subgenus *Velletia*), and especially in having a respiratory channel or siphon on the right side." Subsequently, Mr. Woodward states his belief that *Camptonyx* differs considerably from *Ancylus*, which he had not at hand for comparison, and adds the following description of the animal, as viewed under the microscope:—

"The respiratory orifice is quite on the edge of the mantle. The tentacles are rather conical than angular, and the mouth appears to me rather peculiar, unlike *Physa* and *Lymnæa*. The upper mandible is conspicuous, slightly lobed, but destitute of the ridges seen in the *Helicidæ*, and of the lateral elements which are added in *Lymnæa*. The lingual ribbon is $\cdot 036$ long and $\cdot 014$ wide, with 86 rows of teeth, 87 in a row $\frac{(43 \cdot 1 \cdot 43)}{86}$; they have simple obtuse hooks, as in *Ancylus*: the central row only differ in being symmetrical; the laterals diminish gradually from the 14th to the 43rd, and a second (outer) cusp makes its appearance, and increases until the three near the margin are regularly bicuspid. This tongue is more like *Ancylus* than any other, but differs from it in the absence of those unarmed marginal plates which give a peculiar appearance to the lingual ribbon of *Ancylus*, and are still more conspicuous in *Velletia*. If I had seen nothing else but the tongue, I should have pronounced it a new subgenus of *Ancylus*."

Taking everything into consideration, I think that I am justified in regarding the shell as the type of a new genus. The belief that the habits of the animal are terrestrial, and that abundant moisture, such as occurs periodically in a tropical climate, without actual immersion in water, suffices for its support during its season of activity, appears to me to be confirmed by the opening of the respiratory orifice into the lateral channel of the shell*. This conduit may perform the same office as the

* A subsequent examination of the piece of rock, under a lens, revealed a minute globose *Succinea*, probably the young of the large species mentioned, firmly adhering among the remaining specimens of *Camptonyx*, and proving that these two genera exist in the same medium.





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